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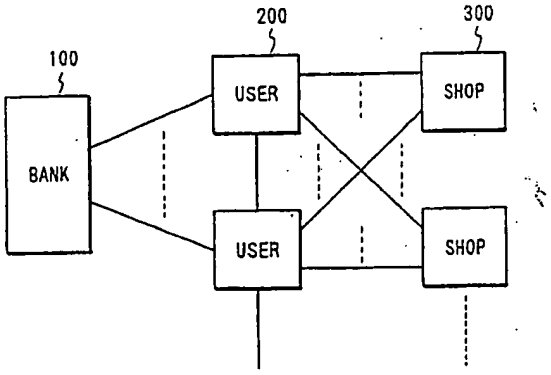
(54) Method and apparatus for implementing electronic cash.

(57) In an electronic cash implementing method, a user makes a bank apply a blind signature to user information Vi produced, by a one-way function, from secret information Si containing identification information, thereby obtaining signed user information. Further, the user makes the bank apply a blind signature to information containing authentication information Xi produced, by a one-way function, from random information Ri, thereby obtaining signed authentication information. The user (200) uses an information group containing the signed user information, the signed authentication information, the user information and the authentication information, as electronic cash for payment to a shop. The shop (300) verifies the validity of the signed user information and the signed authentication information, and produces and sends to the user an inquiry. In response to the inquiry the user produc s a response Yi by using secret information and random information and sends it to the shop. Having verified the validity of the response the shop accepts the electronic cash.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number

EP 90 10 6071

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	US-A-4 759 064 (CHAUM) * the whole document *	1-7,12-17	G 07 F 7/10
D,A	US-A-4 759 063 (CHAUM) * abstract; claims 1-20, 26-38; figures 1-7 *	1-20, 24-31, 37-48	
A	Advances in Cryptology - EUROCRYPT '88 May 1988, Berlin - DE Thomas Beth: "EFFICIENT ZERO-KNOWLEDGE IDENTIFICATION SCHEME FOR SMART CARDS" * pages 77 - 84 *	1-15	
A	Advances in Cryptology - CRYPTO '86 August 1986, Berlin - DE Amos FIAT et.al.: "How to Prove Yourself : Practical Solutions to & Signature Problems" * pages 186 - 194 *	1-20, 32-44	
P,A,D	EP-A-0 348 812 (NIPPON TELEGRAPH AND TELEPHONE CORPORATION) * the whole document *	1-52	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

G 07 F
H 04 L

The present search report has been drawn up for all claims

Place of search	Date of completion of search	Examiner
The Hague	16 August 91	GUIVOL,O.

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone
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